

MINUTES

CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE MEETING OF OCTOBER 14, 1993

The third meeting of the CTCDC in 1993 was held in the City Council Chambers of Palm Desert, on Thursday, October 14, 1993.

Chairman Mike Howard opened the meeting at 9:10 a.m. with the introduction of members and guests. The Chairman thanked the City of Palm Desert for its hospitality and the special efforts of Dick Folkers and Mary Spencer on behalf of the Committee.

The following members, alternates, and guests were in attendance:

ATTENDEES	ORGANIZATION	TELEPHONE
Members (Voting)		
Mike Howard Chairman	California Highway Patrol, Sacramento	(916) 657-7222
Dick Folkers Vice-Chairman	League of California Cities, City of Palm Desert	(619) 346-0611
Merry Banks	California State Automobile Association, San Francisco	(415) 565-2297
Bruce Carter	County Supervisors Association of California, Shasta County	(916) 225-5661
Gary Foxen	Auto Club of Southern California, Los Angeles	(213) 741-4429
Perry Lowden	California Department of Transportation, Sacramento	(916) 654-4551
Farhad Mansourian	County Supervisors Association of California, Marin County	(415) 499-6570
Wayne Tanda	League of California Cities, City of San Jose	(408) 277-4304
Jack Kletzman Secretary	California Department of Transportation, Sacramento	(916) 654-4715

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ATTENDEES	ORGANIZATION	TELEPHONE
Jacob Babico	San Bernadino County	(909) 387-2833
Bob Brow	Sacramento County	(916) 366-2227
Jerry Crabill	BSI Consultants/ Hartzog & Crabill	(714) 731-9455
Bob Crommelir	Consultant	(619) 568-6838
Don Follette	CHP Sacramento	(916) 657-7222
Mike Harrison	Consultant	(707) 838-0745
Joanne Kulachok	BSI Consultants/ City of Yorba Linda	(714) 568-7300
Jerry Kundert	Caltrans Sacramento	(916) 654-5251
Conrad Lapinski	City of Irvine	(714) 724-7365
Tom Micone	CHP Sacramento	(916) 657-7222
Sal Rosano	City of Santa Rosa	(707) 524-5491
David Royer	City of Los Angeles	(213) 485-3548
Lloyd H. Rue	FHWA Sacramento	(916) 551-1305
Seyed Sa Faurein	City of Palm Desert	(619) 346-0611
Bob Seltzer	Consultant	(818) 783-7716
Robert Zeigler	Marin County	(415) 499-6336

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MEMBERSHIP

Mr. Farhad Mansourian, from Marin County temporarily represented the County Supervisors Association of California in the position vacated by Mr. Roger Burger. Ms. Merry Banks substituted for Mr. Russ Taft on behalf of the California State Automobile Association.

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The Committee, as requested by the Secretary, revised the minutes to read that Item 91-7 as completed in lieu of deleted.

MOTION: By Perry Lowden, second by Bruce Carter, to adopt the minutes as amended, of the Hayward meeting held on May 20, 1993. Motion carried 8-0.

ELECTION OF OFFICERS

Chairman Mike Howard announced that this would be his last meeting as a member of the Committee. Special recognition was given to Capt. Mike Howard for his outstanding leadership as Chairman of the CTCDC. Perry Lowden presented a plaque in commemoration of the event.

MOTION: By Mike Howard, second by Perry Lowden, to elect Mr. Dick Folkers as the new chairman. Motion carried 8-0.

Because of the number of new members to be selected, it was the consensus of the Committee to elect the vice-chairman at the next meeting.

MOTION: By Mike Howard, second by Merry Banks, to elect the vice-chairman at the next meeting. Motion carried 8-0.

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92-13 POLICE OR SHERIFF'S FACILITY SIGN

Dick Folkers said he had not received any response from the Chiefs of Police. Bruce Carter surmised that there has not been any interest exhibited by local agencies. Perry Lowden explained that Caltrans had been getting requests from local agencies, to put up signs indicating locations of police or sheriffs facilities. Caltrans proposed a designed which was circulated to local agencies and law enforcement organizations to determine an appropriate symbol. There has been no response.

MOTION: By Bruce Carter, second by Perry Lowden, to conclude the item.
Motion carried 8-0.

ACTION: Item completed.

92-18 GOLF CART SYMBOL SIGN

Dick Folkers exhibited several proposed golf cart related sign designs to the Committee, which he said, were not moving very fast through the Federal review process. Folkers distributed a revised brochure, explaining the licensing process for the City of Palm Desert. Licensing was required by AB 1229, to use golf carts as an alternative means of transportation. Folkers also said this was a five year pilot program which required an annual progress report to the Assembly Transportation Committee.

Gary Foxen told the Committee he advises local agencies that inquire how to sign golf cart crossings, to use written message warnings, based on a previous Committee recommendation. Wayne Tanda said the City of San Jose has for 10 years allowed golf carts on municipal streets. Members of the Committee acknowledged that it is legal to travel on city streets zoned for 25 mph within 1 mile of a golf course. The consensus of the Committee was to wait for Federal approval before recommending any golf cart symbol sign.

ACTION: Item continued

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93-12 PEDESTRIAN CROSSWALKS

Farhad Mansourian presented a five year crosswalk accident history report to the Committee. The data was obtained in cooperation with, and from the files of, the CHP. Mansourian feels the data, by itself, is inconclusive and recommends that a subcommittee be formed to investigate specific sites to see if any valid conclusions can be developed.

Mike Howard recommended the proposed subcommittee review a study that the National Highway Traffic Safety Administration (NHTSA) had just published, regarding pedestrian accidents. The study makes recommendations for programs designed to counter pedestrian problems they had identified. Bruce Carter asked if, in the accident history, unmarked crosswalks were classified as "unpainted crossings" or "out of crosswalks". Mansourian replied that there was no definitive answer, because it was up to the officer in the field how to write up the accident reports. There is also, no distinct category for mid block crossings.

Perry Lowden noticed that high "out of crosswalk" pedestrian accident data appeared in localities which had agencies not in favor of marked crosswalks. Areas exhibiting high "out of crosswalk" pedestrian accidents could merely be the result of fewer crosswalks. Lowden reminded the Committee that school crosswalks were mandatory and should not be included in any issue of whether to mark crosswalks. He mentioned that California State University, Chico was conducting a comparison study, for Caltrans, of painted and unpainted crosswalks in urban and rural areas in northern California.

Farhad Mansourian recommended that the proposed subcommittee investigate areas where data is already available. He also recommended that rural areas be studied because, although the number of accidents is not high compared to urban areas, it is high on a per capita basis. Mansourian said that sufficient data is available to study, but a source of manpower must be located to develop any conclusions from the collected data. Bruce Carter was concerned that a subcommittee composed of people with many other obligations would not suffice. He suggested the use of students under the auspices of an academic institution.

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93-12 PEDESTRIAN CROSSWALKS (continued.)

Mike Howard suggested that the Office of Traffic Safety is very interested in statewide pedestrian studies and might be willing to participate in some fashion. Farhad Mansourian considers the uncorroborated San Diego study, too dated to support current decisions concerning crosswalks. The Committee then discussed various possibilities for funding a study. Bruce Carter said he was not convinced that the crosswalk is the best answer to the problem of conflict between pedestrians and automobiles.

Wayne Tanda requested that one of the products of the proposed subcommittee be a set of guidelines for crosswalk implementation. Dick Folkers suggested a compilation of existing local agency warrants be examined to arrive at a statewide consensus recommendation. Mansourian said that, in the absence of a contradictory finding, his purpose in coming before the Committee was to establish warrants. Gary Foxen said that AAA parent organization has proposed some warrants for crosswalks.

ACTION: Item continued.

93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST

Joanne Kulachok is a member of BSI Consultants, representing the City of Yorba Linda as its Traffic Engineer. Kulachok believes that the conflict between motorist and pedestrian would be eased by slowing the traffic down. She presented a warning symbol sign depicting a motorcycle policeman aiming a radar gun at a motorist with a STRICT ENFORCEMENT AREA plate as an alternate to the regulatory SPEED CHECKED BY RADAR (R48) sign. Such a sign has been placed in the City of Yorba Linda as an experiment. The sign has been in operation for over six months, on a four lane collector road, in hilly terrain, and appears to effectively slow traffic.

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93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST (continued.)

Jerry Crabill described the development of the current configuration of the proposed sign. Crabill requested replacing the regulatory R48 with the proposed warning symbol sign, and if appropriate, a RADAR ENFORCED educational plate. The STRICT ENFORCEMENT AREA sign was not intended for adoption. The second request was the approval for experimentation of a speed reduction program which included:

- Installation of the proposed warning symbol sign.
- Support of the sign with a radar trailer.
- Enforcement of speed limits by police.

Jerry Crabill said its been his experience that law enforcement efforts successfully reduce speeds for about 32 hours after they leave. He said that preliminary observations indicated symbol signs were successful in retaining reduced speed without the return of law enforcement. The City of Laguna Hills has given permission to allow experimentation, subject to approval and guidelines from the CTCDC.

Jerry Crabill, in response to questions posed by Committee members, said that law enforcement officials objected to the stereotype preliminary version of the symbol sign, depicting an officer with his foot on the bumper, as publicizing an unprofessional image.

Perry Lowden objected to the sign's resemblance to a gun. Both Crabill and members of the Committee felt that darkening the radar waves would resolve the issue. Lowden said the sign should be regulatory instead of warning. Bruce Carter said it was his experience signs do not slow traffic. Although he favors testing any traffic control device that may slow traffic, he is concerned the sign may invite target practice. Mike Howard established that the sign would only be used where radar enforcement was used and that may diminish its application for rural areas. Crabill suggested that the speed enforcement program could be employed as a temporary measure until the desired speed reduction had been attained, and then removed.

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93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST (continued.)

Jerry Crabill said he had installed standard signs in preparation for a comparison study between the existing standard package and the proposed speed enforcement program. He has not yet collected any data. Crabill said he has had the proposed symbol sign erected for about eighteen months and there has been a residual speed reduction of 8 mph based on a preliminary 85th percentile of 45 to 47 mph reduced to an 85th percentile of 37 to 38 mph on any day.

Chairman Howard pointed out that since the proposed symbol sign is a pictogram it will need Federal approval for universal deployment. Crabill said he would seek Federal approval. Wayne Tanda said he had R48 signs removed from his jurisdiction because the sign did not work without concerted enforcement which unavailable. He agreed with Carter, in the conclusion, that signs do not slow traffic. He likes the symbol substitution for a word message because of the large non-English speaking population of his jurisdiction. There was some discussion of the appropriateness of the proposed symbol for communities lacking motorcycle enforcement units. Chairman Howard advised the Committee that, the motorcycle officer is universally understood as a traffic enforcement officer.

Perry Lowden felt the proposed symbol is too detailed, the radar waves should be more visible, the sign should be regulatory, but he is in favor of conducting the study. Dick Folkers recommended that the proposed symbol sign be an alternative to the existing R48. Chairman Howard said that current policies require a regulatory sign for enforcement in county jurisdictions.

MOTION: By Wayne Tanda, second by Dick Folkers, to authorize speed enforcement program experimentation in Laguna Hills and Yorba Linda, including the radar enforcement symbol sign, subject to modifications requested by the Committee. Motion carried 8-0.

ACTION: Item tabled.

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93-15 LANE REDUCTION SIGNING

Gary Foxen said one of his members, who was cited, complained about a DO NOT PASS sign (R63) posted in a lane reduction transition. She felt the lane continuation lines encouraged passing and was cited. Foxen noted that this was the first complaint of this kind he had received. He found that the State Traffic Manual suggests a 250' length of marked lane line beyond the DO NOT PASS sign and the lane line terminates where the roadway begins to narrow (Figure 6-15.) Foxen believes a mixed message is being sent to motorists. He recommended that the lane line be dropped at the LANE ENDS MERGE LEFT warning sign (W75.) He also suggested the elimination of the R63 sign.

Mike Howard said that from an enforcement perspective there is no problem because the sign takes precedence. Foxen contended that a two lane roadway marking implies passing is acceptable. Howard pointed out that the same situation would exist, when two cars are abreast, even if the roadway weren't marked. Foxen speculated that the citation could have been issued because the driver cut someone off. Howard agreed saying that it was up to the courts to hear both sides and make a determination. Perry Lowden said he prefers to keep the two distinct lanes as long as possible to let motorists complete their maneuver, but there must be a cutoff. Foxen reiterated his position on mixed messages and asked if the DO NOT PASS sign is essential. Lowden said at some point motorists need to know its time to stop passing and merge. The W11 sign is not sufficient. A regulatory sign is needed for law enforcement to prevent motorists from being cutoff, and that it applied to both lanes.

Chairman Howard said that law enforcement officers tend to use a reasonable and prudent criteria for citations of this nature. They tend not to cite unless there is interference with the flow of traffic and the striping is irrelevant. Foxen asked if there had been any accident studies at lane drops such as this. Lowden said there have been seven or eight studies of various configurations. Lowden offered to black tape a lane drop and see how it affects traffic.

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93-15 LANE REDUCTION SIGNING (continued.)

MOTION: By Bruce Carter, second by Dick Folkers, to ask the Department of Transportation to remove the striping beyond the DO NOT PASS sign at a few lane drops and determine the effect on traffic.

Motion carried 8-0.

ACTION: Item continued.

93-16 NO TURN SYMBOL SIGN, SUPPLEMENTAL PLATE

Gary Foxen said that several years ago the City of Los Angeles conducted an experiment which showed, up to a 15% reduction in violations, for no right turn on red symbol signs. The Federal Sub-committee on Signs approved the City's proposal with the exception that a symbol with an ON RED supplemental plate was preferable to adopting a sign which included a symbol and an ON RED message. The full committee rejected the proposal because they were under the mistaken impression that there was no supporting data.

Foxen is convinced the NO RIGHT TURN (R16) and NO LEFT TURN (R17) symbol signs are superior to the message signs. He recommended the Committee adopt a supplemental ON RED message plate for the R16 and R17 symbol signs as an alternate. Dick Folkers recommended the ON RED message and the symbol sign be put on one blank for ease of fabrication. The Committee discussed whether the sign had been disapproved by the FHWA and decided that the FHWA had not acted on the sign.

MOTION: By Bruce Carter, second by Dick Folkers, to add the ON RED message to R16 and R17 symbol signs to form complete signs and to recommend adoption of each sign as an alternate. Motion carried 8-0.

ACTION: Item completed.

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93-17 STOP SIGN SAFETY WALKER

Dick Folkers said that the manufacturer was asking for permission to experiment. Since a representative of the manufacturer was not present and cooperation with a local agency had not been established, Chairman Howard recommended the item be continued.

ACTION: Item continued.

93-18 CROSSWALKS, SEQUENTIAL LIGHTING

Mike Howard said the City of Santa Rosa wanted to request permission to experiment with a system to light crosswalks. He then introduced Chief Sal Rosano who represents the City.

Chief Rosano explained to the Committee that most of the traffic, in the 40 square miles of Santa Rosa, uses surface roads. These roads were never designed to carry the volume of traffic generated by the rapid growth of the area in the past ten years. The city has major populations of young people and retirees. In spite of aggressive law enforcement and an abundance of crossing guards, the city is concerned with the number of pedestrian-vehicle accidents. In the last several years they have had 135 pedestrian-vehicle collisions with 12 fatalities. Three fourths of these were in crosswalks at uncontrolled intersections.

Most motorists involved in accidents, for a variety of reasons, said they didn't see the pedestrian. Signalizing every intersection of the city or assigning crossing guards to intersections where there are large numbers of seniors would be prohibitively expensive. What is needed is a relatively inexpensive method of alerting the motorist that a pedestrian is in the crosswalk. In holding community meetings to look for solutions, a Mr. Mike Harrison suggested illuminating the crosswalk. Research on the subject could not locate any studies which would confirm or deny the concept.

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93-18 CROSSWALKS, SEQUENTIAL LIGHTING (continued.)

The idea appeals to the Traffic Department staff, but there are some issues to be resolved. The first step is to obtain permission to experiment, so that the City can quantitatively analyze data from an implemented system. Chief Rosano said they have already discarded sequential lighting in favor of constant illumination of the crosswalk. The city would like to try lights all the way across, and on both sides of the crosswalk, illuminated at the same time. The proposed system will be embedded partially in the roadway, activated by a pedestrian push button to cross, solar powered, and have data collection capacity. The traffic device is advisory. Should a citation occur, it would be for violation of pedestrian right of way. The central concept is to alert a motorist, in an uncontrolled intersection, that a pedestrian is in the crosswalk.

The city proposes to select three to five locations, where there is heavy use of crosswalks, with a history of pedestrian-vehicle conflicts, with no other controls, and to adequately publicize the test. To minimize confusion, the city intends to launch a media campaign, erect large illuminated signs, and circulate flyers.

Mike Howard noted that a number of cities in the Central Valley, troubled by low visibility, have wanted to put lighting devices on barricades and other objectionable objects in the roadway and this proposal might be an answer to their need. Chief Rosano said their Traffic Department eliminated sequential lights to avert the impression of directing traffic and all lights would flash at the same time. Gary Foxen was concerned with the color of light, because the display had yellow markers and white lights. Bruce Carter suggested that lighting match the stripe or marker color. Perry Lowden said that the State and Federal Manuals require pavement markers to be the same color as the stripe they are supplementing.

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93-18 CROSSWALKS, SEQUENTIAL LIGHTING (continued.)

Chief Rosano said the prototype had not yet been established. Mr. Harrison will develop the prototype, the city will do the installation, testing, data collection, evaluation, and report to the Committee. The major questions to be answered are how effective is the system in resolving pedestrian-vehicle conflicts and how durable is the system. Bruce Carter suggested the use of an advisory sign, CROSSWALK OCCUPIED WHEN FLASHING and then asked how the system would be actuated and what happens when the system is not actuated? Rosano said that a problem now exists at signals, when pedestrians don't push the "walk" button because of the frustration from waiting too long. He envisions the device illuminating as soon as its depressed and stay on for a predetermined duration based on the width of the street and a reasonable pedestrian speed. It is also possible to use a beam to actuate the system, but the cost may be prohibitive and could require increased maintenance. No cost has yet been established, but it is expected to be less than a normal signalized crosswalk. Chief Rosano said that he anticipates the device operating day and night.

Perry Lowden said he doesn't believe approval is necessary. It is permissible to use pavement markers to supplement a line and the question of a lighted pavement marker is not addressed. The State had tried to use lighted markers to prevent wrong way entry. Lowden recommended the Committee simply support the project. Bruce Carter wanted to see the results of the study and Chief Rosano said the City's Traffic Engineer would feel more comfortable with the Committee's approval of a non-standard device for experimental purposes.

Farhad Mansourian observed that if the experiment works, we have a device, and if it doesn't work, we can demonstrate a positive attitude to policy makers and interest groups. Merry Banks expressed concern about the possibility of motorists looking ahead, seeing the flashing lights, and then making a "U" turn, to avoid what they perceive is an accident. She requested that as part of the study, there be observational comment on how both local and out of area motorist, react to the device. Mr. Harrison agreed saying they were going to get responses from motorists. Chief Rosano reiterated his statement that there will be signs alerting motorists of test crosswalks.

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93-18 CROSSWALKS, SEQUENTIAL LIGHTING (continued.)

Gary Foxen said that since the device warns traffic, it is a traffic control device. Because of the intense interest in such a device, Foxen would like to make sure there are sufficient guidelines in its use. He does not want the devices deployed at controlled intersections and he would like to prevent the use of an inappropriate color. His conclusion is that the Committee should provide guidance by use of the experimental process. Perry Lowden recommended not using flashing or sequential lighting.

Chief Rosano said that in the event that other agencies want to experiment with the device, the Committee may need to retain control of the experiment to prevent unwarranted proliferation of an unregulated device in the absence of any quantitative data. Wayne Tanda said the biggest mistake that can be made is to give the pedestrian a false sense of security. Tanda stated that his concern is that a pedestrian pushes a button, sees a light, and now thinks there is an added level of security. In fact, there is absolutely no additional safety. It's just that hopefully, more drivers will stop but they may not. Tanda requested that the device be installed in such a fashion, as to shield the lights from view of pedestrians.

Chief Rosano said the device was not intended to protect the pedestrian, rather it to alert the motorist of the existence of a pedestrian. The philosophy resulted from the motorists statements of an inability to see the pedestrian.

Chief Rosano estimates it will take about 120 days to develop the prototype, followed by a six month evaluation period. The City would then report back to the Committee. Bruce Carter viewed the device as a mid block crossing device, but the consensus of the Committee was to let the City conduct the test and review the results.

MOTION: By Mike Howard, second by Farhad Mansourian, to grant permission to test the crosswalk lighting device in the City of Santa Rosa with an endorsement of the Committee for the innovative thinking.

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93-18 CROSSWALKS, SEQUENTIAL LIGHTING (continued.)

MOTION AMENDED: By Farhad Mansourian,

1. Lights to be non sequential.
2. Device to be used at non-controlled intersections.
3. Light color shall match the color of the crosswalk.
4. Interim and full reports shall be provided to the Committee.
5. Design to attempt to minimize visibility to the pedestrian.
6. Survey to include pedestrian opinion of the meaning of the device.

Motion and Amendment carried 8-0.

ACTION: Item tabled.

INFORMATIONAL ITEMS

Perry Lowden said that the Marking Committee made the following revised proposals at the June meeting of the National Committee.

- The marking subcommittee approved a single solid yellow centerline on narrow urban streets and mountainous roadways where the prohibition of passing imposes significant delay and an engineering study shows that passing of slow moving vehicles can be safely undertaken .
- Centerlines shall be place on all rural arterial and collector roads, with a traveled way of 18 feet or wider and an ADT of 1000 or more; urban roads 20 feet or wider, and an ADT of 5000 or more; and multilane roads. Centerlines should be placed on urban roads, 20 feet or wider, with an ADT of at least 2500.
- Edgelines shall be placed on freeways, expressways, and rural arterials. Edgelines should be placed on rural collectors, unmarked centerlines, where the pavement edge is not otherwise delineated with curbs or other markings, and where engineering study indicates a need.

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INFORMATIONAL ITEMS (continued.)

Perry Lowden said it looked like State standards would become metric. He believes that in order to qualify for Federal funds the plans will have to be converted to the metric system by 1996. Caltrans estimates the cost to be about \$20 million to convert signs for the State Highway System. A task force has been formed at Caltrans to develop a metric conversion plan, which is due May 31, 1994. Lowden said that Federal money would be needed by the State for conversion. Duplicate signing will not be used except for maximum allowable height under bridges.

Merry Banks expects to have a draft of guidelines for left turn vehicles across light rail tracks, from the Light Rail Subcommittee, in January of 1994.

Bruce Carter recalled that the Committee had discussed convex mirrors and had decided to form a subcommittee but had taken no further action. The audience indicated that most mirrors are used on private property and that local agencies fear the potential litigation resulting from their use. Carter obtained the names of potentially interested parties and will try to form a subcommittee.

ADJOURNMENT

MOTION: By Perry Lowden, second by Bruce Carter, for adjournment.
Motion carried 8-0. The meeting was adjourned at 12:35 PM.